

**Forestwide Aquatic Restoration**

**Wildlife Biological Evaluation for  
Threatened, Endangered, Proposed and Sensitive Species  
and  
Terrestrial Wildlife Report**



Umatilla National Forest

Prepared by:.

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## **INTRODUCTION**

The Umatilla National Forest, is proposing to conduct numerous aquatic restoration projects throughout the Forest. Biological Evaluations (BE) provide a process to review all Forest Service planned, funded, executed or permitted programs and activities for possible effects on threatened, endangered, proposed or sensitive species (FSM 2672.4). BEs are intended to help ensure that Forest Service actions do not contribute to a loss of viability on any native or desired non-native plant or animal species or contribute to trends toward Federal listing of any species. They provide a process and standard by which to ensure that threatened, endangered, proposed, and sensitive species receive full consideration in the decision-making process (FSM 2672.41).

The effects analysis in this BE is required to address any direct, indirect, and cumulative effects of an action on threatened or endangered species or their critical habitat (50 CFR 402.02) and on sensitive species or their habitat (FSM 2672.42). This BE also complies with Section 7 of the Endangered Species Act (ESA), which requires all Federal Agencies, in consultation with the U.S. Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS), to insure that their actions are not likely to jeopardize the continued existence of threatened, endangered or proposed species or adversely modify their habitat. Management policy and direction for threatened, endangered, proposed, and sensitive species is also contained in Forest Service Manual 2670 and under Forest Plan standards and guidelines for threatened or endangered species.

Current management direction for desired conditions for threatened, endangered, proposed and sensitive species on the Umatilla National Forest can be found in the following documents:

- Forest Service Manual and Handbooks (FSM/H 2670/2609)
- National Forest Management Act (NFMA)
- Endangered Species Act (ESA)
- National Environmental Policy Act (NEPA)
- Umatilla National Forest Land and Resource Management Plan (USDA 1990)
- Recovery Plans (species specific)
- Regional Forester policy and management direction

The principle policy document relevant to wildlife management on the Forest is the 1990 Umatilla National Forest Land and Resource Management Plan, referred to as the Forest Plan.

**PROJECT NAME:** Forestwide Aquatic Restoration

**FOREST:** Umatilla National Forest

**MANAGEMENT AREAS:** Forestwide; Riparian Habitat Conservation Areas (RHCAs).

## **PURPOSE AND NEED FOR ACTION**

The specific **Purpose** of this project is to maintain or enhance Watershed health, species recovery and diversity as required by the Forest Plan, as amended by PACFISH.

The overall **Need** for this project is to implement direction from the Forest Plan, as amended by PACFISH. The Forest Plan directs us to manage fish habitat and riparian areas to achieve increases in fish habitat capability as well as to manage soil and water resources to maintain or enhance the long-term productivity of the Forest.

Specific aquatic restoration management objectives associated with the Purpose and Need for this proposal include:

- 1) Provide the necessary habitat to maintain or increase populations of management indicator species: steelhead and redband trout.
- 2) Contribute to recovery of ESA-listed species: bull trout, Middle Columbia River and Snake River Basin steelhead, and Snake River Basin spring Chinook salmon.
- 3) Cooperate and coordinate with other agencies and groups to achieve the following objectives:
  - i) Develop instream habitat improvement projects for anadromous and resident aquatic species with emphasis on cooperative projects with the Bonneville Power Administration, Confederated Tribes of the Umatilla Indian Reservation, Confederated Tribes of the Warm Springs Reservation, the Nez Perce Tribes, local Watershed Councils and Model Watersheds, Snake River Recovery Funding Board, Oregon Department of Fish and Wildlife, Washington Department of Fish and Wildlife, and others as consistent with their organizational missions and/or shared interests.
  - ii) Maintain adequate minimum flows for anadromous and resident species. Coordinate with Oregon Department of Fish and Wildlife and the Washington Department of Fish and Wildlife in the identification of problems and the development of solutions.
- 4) Manage the composition and productivity of key riparian vegetation to protect or enhance riparian-dependent resources.
- 5) Plan, design and implement riparian habitat improvement activities to upgrade riparian areas that are not in a condition to meet management objectives or the desired future condition.
- 6) Improve the rate of recovery in riparian areas that are not in a condition to meet management objectives by eliminating or reducing the impacts of management activities that may slow riparian recovery.
- 7) Maintain or enhance water quality and/or fish habitat through instream or riparian improvements. Implement instream activities outside of the spawning and egg incubation period.
- 8) Provide for input of large, woody debris into all classes of streams and evaluate to determine if objectives are being met. Remove material that causes unacceptable channel and/or bank damage.
- 9) Improve or maintain non-stream associated riparian areas (ground water dependent ecosystems) such as: seeps, springs, bogs and wallows together with their associated vegetative structure.

## **PROPOSED ACTION**

The Umatilla National Forest proposes aquatic restoration on those Private and Public lands within the boundary of the Umatilla National Forest and/or adjacent lands in boundary-spanning fifth-level Hydrological Unit Code (5th HUC) watersheds where restoration activities would benefit or help achieve Forest Service aquatic restoration goals. Any work done on private lands would be conducted under authority of the Wyden Amendment. Public Law 105-277, Section 323 as amended by Public Law 109-54 Section 434. This program has been permanently authorized, Public Law 111-11. For purposes of this NEPA, the Proposed Action would cover the applicable project categories identified within the ARBO II. The project would also incorporate the program administration, general aquatic conservation measures, and Project Design Criteria for aquatic restoration activity categories as described within the ARBO II.

### **Project Categories**

1. Fish Passage Restoration (Stream Simulation Culvert and Bridge Projects; Headcut and Grade Stabilization; Fish Ladders; Irrigation Diversion Replacement/Relocation and Screen Installation/Replacement)
2. Large Wood, Boulder, and Gravel Placement (Large Wood and Boulder Projects; Engineered Logjams; Porous Boulder Weirs and Vanes, Gravel Augmentation; Tree Removal for Large Wood Projects)
3. Dam, Tide gate, and Legacy Structure Removal
4. Channel Reconstruction/Relocation
5. Off- and Side-Channel Habitat Restoration
6. Streambank Restoration
7. Set-back or Removal of Existing Berms, Dikes, and Levees
8. Reduction/Relocation of Recreation Impacts
9. Livestock Fencing, Stream Crossings and Off-Channel Livestock Watering
10. Piling and other Structure Removal
11. Road and Trail Erosion Control
12. Juniper Removal
13. Riparian Vegetation Treatment (controlled burning)
14. Riparian Vegetative Planting
15. Bull Trout Protection
16. Beaver Habitat Restoration
17. Fisheries, Hydrology, Geomorphology Wildlife, Botany, and Cultural Surveys in Support of aquatic restoration

## **REGULATORY FRAMEWORK**

The three principle laws relevant to wildlife management are the National Forest Management Act of 1976 (NFMA), the Endangered Species Act of 1973 (ESA), and the Migratory Bird Treaty Act (MBTA) of 1918. Direction relative to wildlife follows:

- NFMA requires the Forest Service to manage fish and wildlife habitat to maintain viable populations of all native and desirable non-native wildlife species and conserve all listed threatened or endangered species populations (36CFR219.19).
- ESA requires the Forest Service to manage for the recovery of threatened and endangered species and the ecosystems upon which they depend. Forests are required to consult with the US Fish and Wildlife Service (USFWS) if a proposed activity may affect the population or habitat of a listed species.
- MBTA established an international framework for the protection and conservation of migratory birds. This act makes it illegal, unless permitted by regulations, to “pursue, hunt, take, capture, purchase, deliver for shipment, ship, cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird.”

Forest Service Manual Direction provides additional guidance: identify and prescribe measures to prevent adverse modifications or destruction of critical habitat and other habitats essential for the conservation of endangered, threatened, and proposed species (FSM2670.31 (6)). This manual directs the Regional Forester to identify sensitive species for each National Forest where species viability may be a concern.

Forest Plan Amendment # 2 (“Eastside Screens”) established interim wildlife standards for old growth, old growth connectivity, snags, large down logs, and northern goshawks. The Regional Forester has periodically distributed letters clarifying direction in Amendment #2 (Regional Forester, October 2, 1997; October 23, 1997; June 11, 2003).

Additional management direction is provided for conservation of migratory landbirds. This direction is consolidated in the Forest Service Landbird Strategic Plan and further developed through the Partners in Flight Program. The Oregon-Washington Partners in Flight Conservation Strategy for Landbirds in the Northern Rocky Mountains of Eastern Oregon and Washington (Altman 2000) identifies priority bird species and habitats for the Blue Mountains in Oregon.

**Regional Forester’s Sensitive Species List (Update):** Sensitive species are those identified by the Pacific Northwest (Region 6) Regional Forester as needing special management to meet Forest Service Manual direction, Department regulations, and National Forest Management Act obligations and requirements (USDA 2011). In July 2015, Regional Forester Jim Pena, released the current Sensitive Species list that includes federally listed, federally proposed, and sensitive species lists.

## **ANALYSIS METHODS AND ASSUMPTIONS**

This Biological Evaluation (BE) analyzes the potential effects to wildlife species from the proposed Forestwide Aquatic Restoration. This BE satisfies the requirements of Forest Service Manual 2672.4 that requires the Forest Service to review all planned, funded, executed or

permitted programs and activities for possible effects on threatened, endangered, proposed, or sensitive species.

The following sources of information have been reviewed to determine which TES species, or their habitats, occur in the project area (forestwide) and may be effected by the proposed action:

- Regional Forester's Sensitive Species List (2015) and associated species fact sheets
- Forest Service database (NRIS)
- GIS layers

No population surveys specific to this project were conducted. Species presence/absence determinations were based on habitat presence, relevant life history, past wildlife surveys, recorded wildlife sightings, observations, species fact sheets, and published research and literature. Incomplete or unavailable information, scientific uncertainty, and risk are disclosed where applicable.

### **Field Reconnaissance**

Field reconnaissance of individual projects will be performed during individual project planning as needed.

## **AFFECTED ENVIRONMENT – SPECIES CONSIDERED AND EVALUATED**

### **Threatened, Endangered, Proposed, and Sensitive Species**

There are two terrestrial wildlife species that are federally listed as threatened and endangered that occur or are suspected on the Umatilla National Forest, the Canada lynx (threatened) and the gray wolf (endangered west of HWY 395). There are 35 species, including Canada lynx and gray wolves, on the 2015 Regional Forester's Sensitive Species list (terrestrial) that occur on the Umatilla National Forest (Table 1 and Table 2). Twenty-nine of these species are either known to occur or are suspected to occur in the project area, and suitable or potential habitat is present or may be present in the project areas. These species include: gray wolf, North American wolverine, Preble's shrew, little brown myotis, fringed myotis, Townsend's big-eared bat, bald eagle, American peregrine falcon, upland sandpiper, northern goosawk, Lewis's woodpecker, white-headed woodpecker, great gray owl, mountain quail, Columbia spotted frog, Rocky Mountain tailed frog, fir pinwheel, Columbia Gorge Oregonian, western bumble bee, Johnson's hairstreak, shiny tightcoil, Poplar Oregonian, blue mountainsnail, intermountain sulphur, thinlip tightcoil, humped coin, meadow fritillary, and lustrous copper. The western ridged mussel, Columbia clubtail, shortface lanx, and pristine springsnail are analyzed in the aquatics biological evaluation. The other species listed in Tables 1 and 2 would not be affected by the proposed activities due to the fact that they are not known or suspected to occur in the project area or suitable habitat is not present in the project area; therefore, these species will not be further examined.

**Table 1.** Species occurrence for Threatened, Endangered, Proposed and Regional Forester's Sensitive Species

Species	Status	UMA	NFJD	HEP	Walla Walla	Pomeroy
Canada lynx*	Threatened	S	S	S	S	S
Gray wolf	Sensitive/End	D	D	S	D	D
North American wolverine	Sensitive	S	S	S	S	S
Mountain goat (WA only)	Sensitive	D	N	N	D	D
Rocky Mtn bighorn sheep (WA only)	Sensitive	D	N	N	D	D
Preble's shrew (WA only)	Sensitive	D	N	N	S	D
Little brown myotis (WA only)	Sensitive	D	N	N	S	D
Fringed myotis (OR only)	Sensitive	D	S	D	S	N
Townsend's big-eared bat	Sensitive	D	D	S	D	S
Bald eagle	Sensitive	D	D	D	D	D
American peregrine falcon	Sensitive	S	S	S	S	S
Upland sandpiper (OR only)	Sensitive	S	S	S	N	N
Northern goshawk (WA only)	Sensitive	D	N	N	D	D
Lewis's woodpecker	Sensitive	D	D	D	S	D
White-headed woodpecker	Sensitive	D	D	D	D	D
Great gray owl (WA only)	Sensitive	D	N	N	D	S
Green-tailed towhee (WA only)	Sensitive	D	N	N	S	D
Mountain quail (WA only)	Sensitive	D	N	N	S	D
Columbia spotted frog (OR only)	Sensitive	D	D	D	D	N
Rocky Mtn. tailed frog	Sensitive	D	D	S	D	D

\*The ESA listed Canada lynx, and Canada lynx critical habitat, are not present on the Umatilla National Forest (Status of Canada lynx and Documentation in Environmental Analysis, Umatilla NF, Sept. 2012, white paper).

**Table 2.** Invertebrate species occurrence for Threatened, Endangered, Proposed and Regional Forester's Sensitive Species

Species	Status	UMA	NFJD	HEPPNER	Walla Walla (OR)	Walla Walla (WA)	Pomeroy
<b><u>Forestwide</u></b>							
Fir Pinwheel	Sensitive	D	S	S	D	D	S
Columbia Gorge Oregonian	Sensitive	D			D	D	S
Western bumble bee	Sensitive	D	D	S	D	S	D
Johnson's hairstreak	Sensitive	S	S	S	S	S	S
Shiny Tightcoil	Sensitive	S	S	S	S	S	S
<b><u>Oregon Only</u></b>							
Poplar Oregonian	Sensitive	S			S		
Blue mountainsnail	Sensitive	S	S	S	S		
Intermountain sulphur	Sensitive	S	S	S	S		
<b><u>Washington Only</u></b>							
Thinlip tightcoil	Sensitive	D				D	S
Humped coin	Sensitive	D				D	S
Salmon coil	Sensitive	S				S	S
Meadow fritillary	Sensitive	S				S	D
Lustrous copper	Sensitive	S				S	S
Great Basin fritillary	Sensitive	D				D	D
Barry's hairstreak	Sensitive	D				D	D

Status:

Endangered (End)	Federally Endangered
Threatened	Federally Threatened
Sensitive	Sensitive species from 2015 Regional Forester's list

Occurrence:

D	Species <b>Documented</b> in general vicinity of project activities
S	Species <b>Suspected</b> in general vicinity of project activities
N	Species <b>Not documented</b> in area or District



## **Gray wolf** (*Canis lupus*)

*Status* Federal – Endangered west of HWY 395; delisted east of HWY 395  
State – Delisted in OR; Endangered in WA  
Region 6 – Sensitive

### *Life History and Habitat*

The gray wolf is a habitat generalist inhabiting a variety of plant communities, typically containing a mix of forested and open areas with a variety of topographic features (Verts and Carraway 1998). Wolves can occupy a variety of habitat types provided adequate prey exists (Keith 1983, Fuller 1989, Haight et al. 1998) and human activity is minimal (Oakleaf et al. 2006, Belongie 2008). The primary prey species of gray wolves are large native ungulates (Haight et al. 1998, Fuller et al. 2003). Gray wolves are typically sensitive to human disturbance near den and rendezvous sites. The entire Forest is considered suitable habitat for gray wolves.

### *Distribution*

The first pack documented in Oregon was in 2008 and since the wolf population has increased and expanded. There were 5 established wolf packs in Oregon and one pack in Washington on the Umatilla National Forest at the end of 2015. There are 2 additional pairs of wolves on the Forest that were not known to breed in 2015.

For more information about the gray wolf refer to this white paper: “Status and trend of gray wolves and forest management on the Umatilla National Forest” (Berkley and Hickman 2015).

## **North American wolverine** (*Gulo gulo*)

*Status* Federal – Proposed for listing  
State – Threatened in OR; Species of Concern in WA  
Region 6 – Sensitive

### *Life History and Habitat*

Wolverines are strongly associated with remote mountainous wilderness habitats (Beauvais et al. 2004). They inhabit high elevation, alpine and subalpine conifer forest types. The presence of avalanche chutes, boulder fields, and/or large piles of down logs are also important habitat features. Open areas are generally avoided and the most critical habitat component is the absence of human activity or development (Ruggiero et al. 1994, Wolverine Foundation (TWF) 2015). Wolverines will forage in lower elevation forested habitat. In Oregon, the wolverine’s diet consists mainly of elk and deer carrion. Wolverines are extremely mobile travelling great distances within large home ranges. The project’s proximity to open roads and remote areas at high elevation reduces its potential to be occupied habitat, but suitable dispersal and foraging habitat for wolverines may exist in project areas.

### *Distribution*

Wolverines are found in higher elevations of Oregon and Washington, including the northern Blue Mountains and the Cascade Mountains. The nearest known area of confirmed activity is in the Wallowa Mountain Range. There are no documented sightings of wolverine on the Umatilla but numerous unconfirmed sightings have occurred.

**Preble's shrew (*Sorex preblei*)**

*Status:* Federal – Not listed

State – Species of Concern in OR/ State Candidate in WA

Region 6 – Sensitive

*Life History and Habitat*

Observations of the Preble's shrew in Washington occurred in dense lodgepole pine, subalpine fir/lodgepole pine, and grand fir/Engelmann spruce forests between 5,000 and 6,000 feet. These habitats are atypical of the habitats in which these shrews are found in other states (Johnson and Cassidy 1997). In Oregon, the Preble's shrew has been found in a wide variety of habitats including marshes, along streams, dry bunchgrass, and wet, alkaline habitat. Grasses and sagebrush were common to most habitats. There is very little known about the diet of the Preble's shrew (Verts and Carraway 1998).

*Distribution*

In Washington, the Preble's shrew is known only to occur in the Blue Mountains. Most specimens have been found in Garfield County (Johnson and Cassidy 1997).

**Little brown myotis (*Myotis lucifugus*)**

*Status:* Federal – Not listed

State – None

Region 6 – Sensitive

*Life History and Habitat*

The little brown myotis inhabits a wide variety of habitat types including conifer and hardwood forests, along edges of dense forests, in open areas among trees, and most often near a lake, pond, or stream (Verts and Carraway 1998). Foraging habitat is often associated with water. The little brown bat feeds primarily on flies. Human-made structures seem to be the primary sites for maternity colonies. Less frequently, maternity colonies are known to occur in caves, beneath bridges, or in hollow trees. Snags provide summer day roosting sites.

*Distribution*

Widely distributed and the most common bat in Washington.

**Fringed myotis (*Myotis thysanodes*)**

*Status:* Federal – Not listed

State – Sensitive/ Vulnerable in OR; none in WA

Region 6 – Sensitive

*Life History and Habitat*

The fringed myotis is well adapted for foraging within the forest as well as forest edge habitats. Its diet consists mainly of beetles and moths but also may prey on non-flying taxa, suggesting it gleanes prey from vegetation in addition to capturing its prey on the wing. Roosts occur in buildings, underground mines, rocks, cliff faces, and bridges although in the western U.S. and Canada large decadent trees and snags are used as well. Fringed myotis have been documented roosting in a wide variety of tree species and it is likely that structural characteristics (e.g. height, decay stage) rather than tree species play a greater role in selection of a snag or tree as a roost.

### *Distribution*

In Oregon, fringed myotis are rare, with most records of the species occurring west of the Cascade Mountains in southwestern Oregon and the northeastern corner of the state (Csuti et al 2001).

### **Townsend's big-eared bat** (*Corynorhinus townsendii*)

*Status:* Federal – Not listed

State – Sensitive/ Critical in OR; Species of Concern/ State Candidate in WA

Region 6 – Sensitive

### *Life History and Habitat*

The Townsend's big-eared bat occurs in a wide variety of habitat types ranging from sea level to 3,300 meters. Habitat associations include: coniferous forests, mixed meso-phytic forests, deserts, native prairies, riparian, and active agricultural areas. Distribution is strongly correlated with the availability of caves and cave-like roosting habitat, including abandoned mines. The Townsend's big-eared bat is a moth specialist, foraging within wooded areas, along edge habitats and near streams.

### *Distribution*

In Oregon, the Townsend's big-eared bat has been collected throughout most of the state except in parts of the Blue Mountain Province and in the western part of the Basin and Range Province (Verts and Carraway 1998).

### **Bald eagle** (*Haliaeetus leucocephalus*)

*Status:* Federal – Delisted due to recovery

State – None in OR; Sensitive in WA

Region 6 – Sensitive

### *Life History and Habitat*

Preferred habitat for the bald eagle occurs near large bodies of water (rivers, lakes, etc.) that support an adequate food supply. In the Pacific Northwest recovery area, preferred nesting habitat for bald eagles is predominately uneven-aged, mature, coniferous stands (ponderosa pine and Douglas-fir) or large black-cottonwood trees along riparian corridors). Eagles usually nest in mature conifers with gnarled limbs that provide ideal platforms for nests. The nest tree is characteristically one of the largest in the stand and usually provides an unobstructed view of a body of water. Important prey species include fish, birds, mammals, and carrion (NatureServe 2016 and USDI 1986).

### *Distribution*

The bald eagle is fairly common and widely distributed in Oregon and Washington.

### **American peregrine falcon** (*Falco peregrinus anatum*)

*Status:* Federal – Delisted due to recovery

State – Sensitive/ Vulnerable in OR; Sensitive in WA

Region 6 – Sensitive

### *Life History and Habitat*

Suitable habitat for the peregrine falcon includes various open habitats from open grasslands to forested stands in association with suitable nesting cliffs (NatureServe 2016, Marshall et al. 2003). The falcon often nests on ledges or holes on the face of rocky cliffs or crags. Ideal locations include undisturbed areas near water with a wide view and close to plentiful prey. Foraging habitats of woodlands, open grasslands, and bodies of water are generally associated with the nesting territory.

### *Distribution*

Peregrines are fairly rare to uncommon in Oregon and Washington and occur as resident and migratory populations throughout the states.

### **Northern goshawk** (*Accipiter gentilis*)

*Status:* Federal – Not listed

State – Species of Concern in OR/ State Candidate in WA

Region 6 – Sensitive

### *Life History and Habitat*

Northern goshawk are habitat generalists but are often associated with old forest and unmanaged young forests in montane, lower montane, and riparian woodland communities. Important habitat attributes of goshawk prey species include snags, down logs, woody debris, large trees, openings, herbaceous and shrubby understories and an intermixture of various forest structural stages (Wisdom et al. 2000). During winter some goshawks may travel short distances to lower elevations and more open habitats in all upland woodland types (Wisdom et al. 2000). In general, goshawk nest areas are unique in structure, with large trees, dense canopies, and high canopy closure. Goshawk nesting habitat in eastern Washington and Oregon is generally composed of mature and older forests (McGrath et al. 2003).

### *Distribution*

Northern goshawks are permanent residents of forested portions of the Cascades, Olympic, and Blue mountains.

### **Great gray owl** (*Strix nebulosa*)

*Status:* Federal – Not listed

State – None

Region 6 – Sensitive

### *Life History and Habitat*

The great gray owl is an uncommon to rare inhabitant of forests adjacent to openings above 3,000 feet in the Cascade, Blue, and Wallowa mountains. Habitat of the great gray owl consists of mature mixed conifer forests of Douglas-fir, western larch, and ponderosa pine or mature subalpine forests or Englemann spruce, subalpine fir, and lodgepole pine adjacent to forage habitats in forest openings and meadows, with quaking aspen often present (Wahl et al. 2005). They most frequently are found in old-growth forests on north-facing slopes (Csuti et al. 1997). This species nests in broken-top snags, mistletoe brooms, and nests of other species.

### *Distribution*

Great gray owls are year-round residents in north central Washington and in the Blue Mountains and eastern side of the Cascade Mountains in Oregon.

### **Upland sandpiper** (*Bartramia longicauda*)

*Status:* Federal – Not listed

State – Sensitive/ Critical in OR; Endangered in WA

Region 6 – Sensitive

### *Life History and Habitat*

Upland sandpiper habitat is primarily restricted to open tracts of grassland habitat with water or intermittent creeks nearby. This includes large montane meadows and prairie-grasslands (1,000-30,000 acres), usually surrounded with trees (lodgepole pine and some ponderosa pine), or in the middle of sagebrush communities, and generally at elevations from 3,400 to 5,000 feet (Csuti et al. 1997, NatureServe 2016, and Marshall et al. 2003). Taller grassy areas are preferred for nesting and brood cover (NatureServe 2016). Foraging occurs in open meadows (Csuti et al. 1997, NatureServe 2016, and Marshall et al. 2003).

### *Distribution*

Upland sandpipers are rare breeders in large meadows within forests of eastern Oregon. They are almost never observed away from breeding areas in Oregon. Observations of the species have occurred near the town of Ukiah (not on the National Forest).

### **Lewis's woodpecker** (*Melanerpes lewis*)

*Status:* Federal (USFWS) – Species of Concern

State – Sensitive/ Critical in OR; Species of Concern/ State Candidate in WA

Region 6 – MIS, Sensitive

\*Management Indicator Species - Primary Cavity Nester

### *Life History and Habitat*

Lewis's woodpeckers inhabit primarily open forest and woodlands; it is distinguished from other woodpecker species by its unique flycatching behavior and distinctive plumage (Marshall et al. 2003). Nesting habitat consists of three distinct types in eastern Oregon: riparian areas with large cottonwoods, and open canopied old forest in ponderosa pine, or burned old forest in ponderosa pine (Wisdom et al. 2000). Home ranges are 2.5 to 15 acres in size (Johnson and O'Neil 2001). In burned areas, ponderosa pine snags greater than 16 inches dbh are chosen for nesting. Similar diameter cottonwood snags in riparian areas are selected (Galen 1989). Post-fire habitats for species such as the Lewis's woodpecker occur periodically in random fashion across the Umatilla National Forest. Very little salvage logging occurs on the forest.

### *Distribution*

Lewis's woodpeckers breed in eastern Washington and Oregon along the east slope of the Cascades and the Blue Mountains (Marshall et al. 2003). They are locally common in the transition zone between ponderosa pine and shrub-steppe habitats. They were formerly common in far-eastern Washington, but numbers in Spokane County have declined dramatically, and populations appear to be extirpated in Walla Walla and Columbia Counties, although there may still be a lingering breeding colony in the Blue Mountains.

### **White-headed woodpecker (*Picoides alborarvatus*)**

*Status:* Federal – Species of Concern

State – Sensitive/ Critical in OR; State Candidate in WA

Region 6 – Sensitive

\*Management Indicator Species - Primary Cavity Nester

#### *Life History and Habitat*

White-headed woodpeckers are associated with open canopy forests with large mature and over mature ponderosa pine; and less frequently mixed ponderosa and Douglas-fir stands (Burleigh 1972, Ligon 1973, Cannings, 1995, Buchanan et al. 2003). This species relies almost exclusively upon the seeds from large ponderosa pine cones for foraging and eats insects gleaned off ponderosa pine trees. White-headed woodpeckers prefer large ponderosa pine snags for nesting; however other species are used including grand fir, Douglas-fir and aspen.

Past harvest activities have concentrated on removing the large overstory ponderosa pine, western larch and Douglas-fir trees and snags, setting many stands back to younger structural stages. Fire suppression has increased stocking of understory trees shifting stand structure from old forest single structure to old forest multi structure. The areas being considered for aquatic restoration in the warm dry biophysical environments may have the appropriate tree species and composition to be used by white-headed woodpeckers, although these riparian sites are not likely as preferred.

#### *Distribution*

White-headed woodpeckers are found in the Blue, Ochoco, and Wallowa mountains, as well as the east side of the Cascades. Loss of mature ponderosa pine habitat has resulted in a severe decline of this species in the Blue Mountains of Oregon (Csuti et al. 2001). Formal white-headed woodpecker monitoring was conducted on the Umatilla National Forest in 2011 through 2015. There were no verified observations of white-headed woodpeckers in 2011 and 2012. White-headed woodpeckers were detected in 2013, 2014, and 2015.

### **Mountain quail (*Oreortyx pictus*)**

*Status:* Federal – Not listed

State – None

Region 6 – Sensitive

#### *Life History and Habitat*

Mountain quail inhabit very dense brush cover, shrubby vegetation including clear-cuts, in forested areas and in riparian habitats (Wahl et al. 2005). It prefers open forests and woodlands with an ample undergrowth of brushy vegetation. The species also inhabits thickets of chaparral and riparian woodland, meadow edges in forests, and brushy undergrowth following timber harvest. Mountain quail winter at lower elevations (Csuti et al. 1997).

#### *Distribution*

Mountain quail are uncommon year-round residents on southwest Olympic Peninsula and adjacent Puget Trough, in the Cascades of southcentral Washington through western Oregon and in the Blue Mountains in southeast Washington and Oregon.

**Columbia spotted frog (*Rana luteiventris*)**

*Status:* Federal – Not listed

State – Sensitive/ Critical in OR; State Candidate in WA

Region 6 – Sensitive

*Life History and Habitat*

Columbia spotted frogs are highly aquatic and rarely found far from permanent water, but they can also utilize intermittent streams and meadows in the spring. They occupy the sunny, vegetated margins of streams, lakes, ponds, spring complexes, and marshes. Columbia spotted frogs are mobile; they seasonally move between hibernacula (overwintering sites), breeding habitat, and wet meadow/riparian foraging areas (Bull and Hayes 2002). Some Columbia spotted frogs will remain and overwinter in breeding habitat if conditions are ideal. Hibernacula are typically ponds, slow-moving streams, and springs where water surrounding the frog does not freeze and oxygen levels are adequate (Tait 2007, Bull and Hayes 2002). Breeding occurs in shallow (<60 cm) emergent wetlands such as riverine side channels, beaver ponds, springheads, and the wetland fringes of ponds, small lakes, and livestock ponds. Water levels must persist until eggs are hatched and tadpoles transform.

*Distribution*

In Washington and Oregon, Columbia spotted frogs occur east of the Cascades.

**Rocky Mountain tailed frog (*Ascaphus montanus*)**

*Status:* Federal – Not listed

State – Sensitive/ Vulnerable in OR; Species of Concern/ State Candidate in WA

Region 6 – Sensitive

*Life History and Habitat*

The Rocky Mountain tailed frog differs from other frogs found on or adjacent to the Umatilla National Forest by selecting cold, high gradient, boulder and cobble dominated streams for breeding. Streams with dense overstory shade are preferred. Froglets and adults are closely associated with the streams, often hiding in gravel and cobble substrates.

*Distribution*

The distribution of this species in Oregon is relatively restricted to the northeast corner of the state.

**Fir pinwheel (*Radiodiscus abietum*)**

*Status:* Federal – Not listed

State – None

Region 6 – Sensitive

### *Life History and Habitat*

Most often found in moist and rocky Douglas-fir forest at mid-elevations in valleys and ravines (Frest and Johannes 1995a). Often this species is found in or near talus of a variety of rock types or under fallen logs (Pilsbry 1948, Brunson and Russell 1967, Frest and Johannes 1995b). Moist sites are preferred, low on slope or near persistent water sources, but outside of floodplains. Feeds on organic detritus and microorganisms on leaf surfaces, such as molds and bacteria.

### *Distribution*

The fir pinwheel is known from the Blue Mountains in extreme northeastern Oregon (above Weston, Umatilla Co.); in Washington, on the Colville Ranger District of the Colville NF, Stevens County.

### **Columbia Gorge Oregonian**

*Status:* Federal – Not listed

State – None

Region 6 – Sensitive

### *Life History and Habitat*

The Columbia Gorge Oregonian is herbivorous, feeding on the decaying remains of herbaceous plants as well as algae from wet surfaces at the edge of streams and seeps (Applegarth and Duncan 2005). This species prefers dry, exposed taluses, most frequently basalt (Frest and Johannes 1995a,b). The site where this taxon was recently collected in Washington (Joseph Canyon) was at the mouth of a canyon and consisted of a rocky area that appeared to be the dry bed of an ephemeral creek (Jepsen *et al.* 2012).

### *Distribution*

The Columbia Gorge Oregonian occurs in southeastern Washington and northeastern Oregon (Jepsen *et al.* 2012, Burke 2013), as well as west-central and northern Idaho.

### **Western bumble bee (*Bombus occidentalis*)**

*Status:* Federal – Not listed

State – None

Region 6 – Sensitive

### *Life History and Habitat*

Western bumble bees are generalist and forage on a variety of flowering plants. The habitat for this species is described as open grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadows (Williams *et al.* 2014).

### *Distribution*

Populations of the western bumble bee in Oregon and Washington have mostly disappeared. Recent survey efforts have detected some western bumble bees in the Blue Mountains but they are rare.

### **Johnson's hairstreak (*Callophrys johnsoni*)**

*Status:* Federal – Not listed

State – None



## Region 6 – Sensitive

### *Life History and Habitat*

Johnson's hairstreak habitat is almost entirely restricted to cool, moist, old-growth conifer forests of the Pacific Northwest (Miller and Hammond 2007). Caterpillars feed on dwarf mistletoes that grow on various conifers while adults feed on nectar from various flowering plants (Miller and Hammond 2007).

### *Distribution*

This species is found in conifer forests throughout the Pacific Northwest west of the Cascade Mountains. However, there is a disjunct population of Johnson's hairstreak in the Hell's Canyon region of northeast Oregon and adjacent Idaho (Miller and Hammond 2007). The current known geographic distribution of Johnson's hairstreak occurs on the neighboring Wallowa-Whitman National Forest.

### **Shiny tightcoil** (*Pristiloma wascoense*)

*Status:* Federal – Not listed

State – None

Region 6 – Sensitive

### *Life History and Habitat*

*Pristiloma* species graze on microscopic periphyton (bacteria, fungi, yeasts and other microscopic organisms) found on moist surfaces of wood, green and decaying vegetation, and rocks (Gowan and Burke 1999). Most sites for this species are in ponderosa pine (*Pinus ponderosa*) and Douglas fir forests at moderate to high elevations (Frest and Johannes 1995). The eastern Washington record is from a relatively moist, shaded basalt cliff and with talus and *Populus* cover (Frest and Johannes 1995). Burke and Leonard (2009, *draft*) describe the habitat as primarily under deciduous trees, particularly quaking aspen and red alders.

### *Distribution*

It is known from the Washington and Oregon Cascades (Branson 1977, Frest and Johannes 1999, Branson 1980). It is also reported from the Blue Mountains in Oregon (Wallowa Valley above Wallowa Lake in Wallowa County).

### **Poplar Oregonian** (*Cryptomastix (Bupigona) populi*)

*Status:* Federal – Not listed

State – None

Region 6 – Sensitive

### *Life History and Habitat*

The biology and ecology of this species are incompletely understood. This taxon is found mostly in moderately xeric, rather open and dry, large-scale basalt taluses. It is usually found at lower elevations on steep, cool (generally north or east-facing) lower slopes in major river basins. Talus vegetation may include *Celtis*, *Artemisia*, *Prunus*, *Balsamorhiza*, grasses, *Seligeria*, and some bryophytes. The surrounding vegetation is generally sage scrub (Frest and Johannes 1995a).

### *Distribution*

Most known colonies occur at slope bases along major river corridors, including the Snake River and Salmon River. The range includes Wallawa County in Oregon and may extend down the Snake River to Clarkston, Washington (Frest and Johannes 1995a). According to Frest and Johannes (1995a), several years ago it was believed that the Poplar Oregonian was much more widespread. It was probably once comparatively frequent in the areas underlain by the Grande Ronde and Columbia River basalts, Snake River, Salmon River, and lower Clearwater River. It now occurs as isolated colonies in relatively undisturbed portions of its original distribution.

### **Blue mountainsnail** (*Oreohelix strigosa delicata*)

*Status:* Federal – Not listed

State – None

Region 6 – Sensitive

### *Life History and Habitat*

The life history of this subspecies is mostly unknown. The blue mountainsnail browses on plants and rock surfaces for detritus, microscopic fungi, plants and animals. This species generally occurs in open forested areas and sometimes in riparian areas where it may be found in forest floor litter, under shrubs, or in rock talus (Burke 2013). Specimens collected along the South Fork Walla Walla River in 2012 were found on rock outcrops and in talus with small seeps (Jepsen et al 2012).

### *Distribution*

All known sites are located in the Walla Walla River Canyon in northeast Oregon. Current distribution of this subspecies is not well known. It is likely this subspecies is restricted to the Blue Mountains.

### **Intermountain sulphur** (*Colias occidentalis pseudochristina*)

*Status:* Federal – Not listed

State – None

Region 6 – Sensitive

### *Life History and Habitat*

Depending on seasonal conditions, adults of this subspecies fly mostly in late May (e.g. Asotin Co. Washington, 3400 ft.), but individuals have been collected at higher elevations through late June (Minam River, 3000 ft.) and early July (upper Imnaha River, 4400 ft.). The flight periods of *C. occidentalis* are from May-September, peaking in June through July. This species inhabits open woodland from 1036 to 1524 m (3400 to 5000 ft.), including meadows, roadsides, and open forest. Members of this subspecies are most often found on steep sunny slopes at the ecotone between forest and shrubsteppe or grassland habitats (Warren 2005).

### *Distribution*

The subspecies is found from the eastern Blue Mountains in Washington, through the Blue and Ochoco Mountains in Oregon. Numerous locations in northeast Oregon, in the Ochoco, Aldrich, Blue, and Wallowa mountains.

**Thinlip tightcoil** (*Pristiloma idahoense*)

*Status:* Federal – Not listed

State – None

Region 6 – Sensitive

*Life History and Habitat*

*Pristiloma* species graze on microscopic periphyton (bacteria, fungi, yeasts and other microscopic organisms) found on moist surfaces of wood, green and decaying vegetation, and rocks (Gowan and Burke 1999). This species is somewhat mesophilic, generally occurring at rather low elevations in ponderosa pine (*Pinus ponderosa*) and Douglas fir (*Pseudotsuga menziesii*) forests (Frest and Johannes 1995a), as well as in cedar (*Cedrus*) and hemlock (*Tsuga*) forests (Burke 2009, *pers. comm.*). In general, moist valley, ravine, gorge, or talus sites are preferred, *i.e.* low on a slope and near permanent or persistent water, but not normally subject to regular or catastrophic flooding (Frest and Johannes 1995a).

*Distribution*

The thinlip tightcoil occurs in Pend Oreille County of northeastern Washington (mostly east of the Pend Oreille River) (Hendricks and Maxell 2005; Burke and Leonard 2009, draft). There is one historical record of this species from the Blue Mountain region in Umatilla County, Oregon (Baker 1932).

**Humped coin** (*Polygyrella polygyrella*)

*Status:* Federal – Not listed

State – None

Region 6 – Sensitive

*Life History and Habitat*

Humped coin feed by scraping algae, yeast, bacteria and diatoms from rock and woody surfaces. Frest and Johannes (1995a) describes habitat as partly open forested talus with rich understory, and diverse forbs, mosses and deciduous shrubs. Moist sites are preferred, low on slope or near persistent water sources, but outside of floodplains. The 2009 site along the Touchet River in the Umatilla NF is in streamside debris, in a forest of grand fir, Douglas-fir, and Sitka spruce.

*Distribution*

The humped coin has been located in the Blue Mountains (15 miles east of Walla Walla) in WA and east of Milton, 2-3 miles up north fork of Walla Walla River in Umatilla Co., Oregon. Recent attempts to relocate Oregon sites have not been successful. In Washington, a site was located in spring 2009 in the Umatilla National Forest, along the Touchet River.

**Meadow fritillary** (*Boloria bellona*)

*Status:* Federal – Not listed

State – None

Region 6 – Sensitive

*Life History and Habitat*

Larvae feed on *Viola* (violet) species (Pyle 2002). The butterfly occurs in more natural habitats

such as moist meadows, streamsides, aspen parklands, pine woods, and prairies. Adults fly at 600 to 1,500 m (2,000 to 5,000 ft) (Pyle 2002). Records from Oregon indicate an association with moist riparian habitat dominated by *Salix* sp. and surrounded by coniferous forest (Warren 2005).

#### *Distribution*

This species was once known from Okanogan, Ferry, Spokane, Whitman, Columbia Counties, but southeastern populations are believed to be extirpated (Pyle 2002). Aside from a colony found on the Loup Loup Road in Okanogan County, recent records of *B. bellona* in Washington are all from between the northern Okanogan and Columbia rivers (Pyle 2002). *Boloria bellona* is known from an area around Lehman Springs in the Blue Mountains, Umatilla County. This population has not been seen since 1984, and may be extirpated, although undiscovered populations in this area may also exist. This species is suspected from Baker, Grant, Morrow, Union, and Wallowa Counties (Warren 2005).

#### **Lustrous copper** (*Lycaena cupreus*)

*Status:* Federal – Not listed

State – None

Region 6 – Sensitive

#### *Life History and Habitat*

Adults fly erratically and in small numbers at elevations of 1400 to 2600 m (4500 to 8500 ft.). This species has one flight between late May and late August, depending on the altitude and snowmelt (Pyle 2002). The lustrous copper is found along alpine ridges and rockslides; mid-elevation talus slopes, mountain meadows, sagebrush flats, and roadsides (Opler *et al.* 2011, Pyle 2002). *L. cupreus* is also sometimes found along streams (NatureServe2011).

#### *Distribution*

This species has been recorded only at the far northern edge of the state of Washington but in Oregon it is found at high elevations in the Blue, Steen, and Warner Mountains (Pyle 2002). It is documented from Crook, Deschutes, Grant, Harney, Klamath, Lane, Lake, Wallowa, and Wheeler Counties. It is suspected in Baker, Douglas, Jefferson, Malheur, Morrow, Umatilla, and Union Counties.

## **ENVIRONMENTAL CONSEQUENCES**

### **Alternative 1 – No Action**

Direct, indirect, and cumulative effects

Under the No Action alternative, current management actions would continue, which includes a mix of protection strategies for aquatic resources and ongoing watershed and vegetation management. Watershed and aquatic restoration would be maintained or improved at current rates; slower than rates compared to the action alternative. Furthermore, not only would the Forest continue to implement aquatic restoration at a slower rate, it would miss out on opportunities for the Aquatic Restoration Program to be integrated into vegetation projects as they are implemented across the landscape. The Forest would also not be prepared to take advantage of many of the funding opportunities currently available to implement essential

watershed restoration projects that would aid in the recovery of aquatic TES species, provide benefits to riparian associated wildlife species, and put watersheds back on an improving trajectory. Potential impacts to terrestrial wildlife species under the No Action alternative will be similar to the Proposed Action alternative in terms of species affected (Table 3); however, potential impacts would occur at a slower rate and would depend on the scope and scale of the project. Poor aquatic function can act as an environmental stressor for many wildlife species, especially those closely associated with aquatic, riparian, and meadow habitats. Therefore, Alternative 1 could have a minor, indirect negative impact on species health/fitness but will not likely result in a loss of viability, nor lead to a trend toward federal listing for any wildlife species.

Overall, the Umatilla will continue to be managed under the Forest Plan as amended, which will include some aquatic restoration management and protection. Alternative 1, in combination with ongoing management actions under the plan, will have slight positive cumulative impacts to many wildlife species.

## **Alternative 2 – Proposed Action**

### **Potential Direct and Indirect Effects of the Proposed Action for Threatened, Endangered, Proposed and Sensitive Species**

Species dependent on snags could be affected by removing danger trees at specific work sites however this is expected to be a minimal number of snags removed. One of the goals of restoration is to maintain trees and snags in riparian zones as these provide shade and future wood inputs to the stream. Wildlife and invertebrate species that depend on down wood, snags, dwarf mistletoe brooms, dense forest with abundant saplings and small poles, and closed canopy forests for survival and reproduction, will not be detrimentally affected by these projects. Some of the proposed action may occur in old forest stands. In-stream projects will not fragment or decrease connectivity for old growth dependent species.

#### **Gray wolf**

##### *Determination of Effects and Rationale*

Wolves may be disturbed or temporarily displaced by proposed activities during implementation. Wolves denning in the area may be disturbed, may abandon their den site and move their pups to a different location by some of the activities depending on proximity, topography, seasonality of implementation, and the nature of the activity.

The proposed project **may affect but is not likely to adversely affect** the gray wolf. The rationale for this determination is as follows:

- No den or rendezvous sites have been identified west of HWY 395
- No risk of direct effects
- Indirect effects are discountable and/or insignificant because wolves are wide-ranging, habitat generalist.
- Prior to specific project activities (west of HWY 395), surveys and coordination with Oregon Department of Fish and Wildlife (ODFW) and US Fish and Wildlife Service

(USFWS) should be initiated by the Wildlife Biologist. If wolves become established west of HWY 395 and active den and rendezvous sites are identified before or during project implementation, project activities will be consistent with the ARBA PDCs for protection of ESA-listed wolves and conservation measures will be implemented as appropriate. Wildlife Biologists will refer to “Status and trend of gray wolves and forest management on the Umatilla National Forest” (Berkley and Hickman 2015) white paper to determine appropriate conservation measures in addition to the PDC in ARBA for den and rendezvous sites (i.e., no projects/activities within 1 mile of den or rendezvous sites scheduled to occur between April 15 and June 30). The white paper identifies April 1 through July 15 for activity restrictions around den sites based on local ODFW data in the analysis area. The additional timeframe for avoidance of disturbance will further ensure that effects will remain at the NLAA determination as indicated by USFWS concurrence in the ARBO.

### **North American wolverine**

#### *Determination of Effects and Rationale*

Project areas associated with the proposed action could be used by wolverines as dispersal or foraging habitat. There is potential for increased habitat fragmentation and human presence associated with activities in the project area.

The proposed project would have **no impact** on the North American wolverine. This determination is based on the following reasons:

- No known populations currently occupy the Forest
- No natal denning habitat within proposed project areas
- Habitat suitability would not be affected by the proposed thinning activities. Treated dispersing and foraging habitat would remain dispersing and foraging habitat following implementation.
- While highly unlikely, any wolverines potentially encountered will likely be dispersing individuals and will not remain in the area.
- If any evidence of wolverines is discovered during project implementation, conservation measures will be implemented as appropriate.

### **Preble’s shrew**

Some activities associated with this project that involve the use of heavy equipment, primarily road relocation, and riparian vegetation treatments **may impact** potential Preble’s shrew habitat and individuals but will not likely result in a loss of viability, nor lead to a trend toward federal listing. The majority of proposed activities are outside of preferred Preble’s shrew habitat.

### **Bats (little brown myotis, fringed myotis and Townsend’s big-eared bat)**

The activities associated with the proposed action may impact potential roosting habitat (snags) for the little brown myotis, fringed myotis and Townsend’s big-eared bat. Snags will be preserved unless identified as a safety hazard. Some trees may be removed from upland and riparian sites in order to introduce large wood to project streams. However, the amount of area altered as a result of removing a few trees for instream placement is inconsequential. Important roosting habitat in the form of caves, rocks, abandoned mines, and buildings will not be altered.

Bridges will not be altered until after site assessment takes place to determine presence of roosting bats.

Implementation of the proposed action **may impact** individuals or habitat, but will not likely contribute to a trend towards federal listing or loss of viability for the little brown myotis, fringed myotis, and Townsend's big-eared bat for the following reasons:

- The potential exists for the possible removal of snags if deemed a hazard.

#### **Raptors (bald eagle, American peregrine falcon, northern goshawk, great gray owl)**

The activities associated with this project will have **no impact** the bald eagle, peregrine falcon, northern goshawk, or great gray owl or their preferred habitat. This determination is based on the following reasons:

- Pre-treatment, site specific surveys and project design criteria will be implemented to protect known and discovered nests as appropriate.
- Ability to move away from disturbance during project implementation
- The amount of area impacted is inconsequential compared to the total habitat area

#### **Upland sandpiper**

Past surveys conducted in upland sandpiper habitat suggests the species is not present on Forest Service lands. All historical sites are on adjacent private lands. For these reasons, the proposed project activities would have **no impact** on the upland sandpiper.

#### **Lewis's woodpecker**

Potential hazard tree removal and road relocation activities associated with this project **may impact** preferred Lewis's woodpecker habitat but will not likely contribute to a trend towards federal listing or loss of viability. This determination is based on the following reasons:

- The species is known to nest in riparian areas (mainly cottonwood trees)
- The potential exists for the possible removal of snags if deemed a hazard. Snag removal may impact potential nesting trees, but the amount of area impacted is inconsequential compared to the total habitat area.
- The majority of proposed activities are outside of Lewis's woodpecker habitat

#### **White-headed woodpecker**

Potential hazard tree removal and road relocation activities associated with this project **may impact** preferred white-headed woodpecker habitat but will not likely contribute to a trend towards federal listing or loss of viability. This determination is based on the following reasons:

- The potential exists for the possible removal of snags if deemed a hazard. Snag removal may impact potential nesting trees, but the amount of area impacted is inconsequential compared to the total habitat area.
- The majority of proposed activities are outside of white-headed woodpecker habitat

#### **Mountain quail**

Proposed activities affecting understory, shrubby vegetation within riparian areas **may impact** mountain quail and their preferred habitat, but will not likely contribute to a trend towards federal listing or loss of viability. This determination is based on the following reasons:

- The potential exists for the possible impact to preferred habitat

### **Columbia spotted frog**

Implementation of the proposed action **may impact** individuals or habitat, but will not likely contribute to a trend towards federal listing or loss of viability for the Columbia spotted frog for the following reasons:

- The potential exists for possible disturbance to preferred habitat
- Activities using heavy equipment may impact individuals.

### **Rocky Mountain tailed frog**

Implementation of the proposed action **may impact** individuals or habitat, but will not likely contribute to a trend towards federal listing or loss of viability for the Rocky Mountain tailed frog for the following reasons:

- The potential exists for the possible disturbance to preferred habitat.
- Instream activities and activities using heavy equipment may impact individuals.

### **Western bumble bee, intermountain sulphur, meadow fritillary, and lustrous copper**

Some of the proposed project activities **may impact** individuals or habitat of the western bumble bee, intermountain sulphur, meadow fritillary, and lustrous copper but will not likely contribute to a trend towards federal listing or loss of viability for any of these species. This determination is based on the following reasons:

- The potential exists for the possible disturbance to preferred habitat (mainly meadows)
- Activities using heavy equipment and riparian vegetation treatments (i.e. prescribed fire) may impact individuals

### **Johnson's hairstreak**

Habitat important for Johnson's hairstreak will not be reduced due to any aquatic restoration projects. Aquatic restoration activities will not cause reductions in timber or any dwarf mistletoe present. Implementation of the proposed action would have **no impact** on the Johnson's hairstreak for the following reasons:

- Timber harvest is not a planned activity with these projects.
- The amount of area altered by this proposed action is inconsequential
- This project does not include the removal of any potential dwarf mistletoe habitat.

### **Fir pinwheel, Columbia Gorge Oregonian, blue mountainsnail, thinlip tightcoil, and humped coin**

Some of the proposed project activities **may impact** individuals or habitat of the fir pinwheel, Columbia Gorge Oregonian, blue mountainsnail, thinlip tightcoil, and humped coin but will not likely contribute to a trend towards federal listing or loss of viability for any of these species. This determination is based on the following reasons:

- The potential exists for the possible disturbance to preferred habitat
- Activities using heavy equipment may impact individuals



## Shiny tightcoil and Poplar Oregonian

The proposed action would have **no impact** on the shiny tightcoil and the Poplar Oregonian because potential activities would not occur in preferred habitat and these species have not been documented on the Forest.

**Table 3.** Summary table of threatened, endangered, and sensitive species, habitat, and effects determinations.

Species	Status	Occurrence	Habitat	Habitat presence in project area	Effect/Impact
<i>Lynx canadensis</i> <b>Canada lynx</b>	Threatened	Suspected	Dense Forest	Potential, no critical habitat	No Effect
<i>Canis lupus</i> <b>Gray wolf</b>	Endangered	Documented	Generalist	Suitable habitat	May Affect
<i>Gulo gulo</i> <b>North American wolverine</b>	Proposed Threatened	Suspected	Forests, high elevation, snowpack	Potential foraging habitat	No Effect
<i>Oreamnos americanus</i> <b>Mountain goat (WA only)</b>	Sensitive	Documented	Cliffs, ridgetops	No habitat	No Impact
<i>Ovis Canadensis</i> <b>Rocky Mtn bighorn sheep (WA only)</b>	Sensitive	Documented	Open, rocky slopes, cliff bands	No habitat	No Impact
<i>Sorex preblei</i> <b>Preble's shrew (WA only)</b>	Sensitive	Documented	Open, grass, shrubs, wet	Potential habitat	May Impact
<i>Myotis lucifugus</i> <b>Little brown myotis (WA only)</b>	Sensitive	Documented	Patchy trees, lakes, streams	Potential habitat	May Impact
<i>Myotis thysanodes</i> <b>Fringed myotis (OR only)</b>	Sensitive	Documented	Forests, forest edges, cliffs, caves, snags	Potential habitat	May Impact
<i>Corynorhinus townsendii</i> <b>Townsend's big-eared bat</b>	Sensitive	Documented	Mixed forests, caves, mines, riparian	Potential habitat	May Impact
<i>Haliaeetus leucocephalus</i> <b>Bald eagle</b>	Sensitive	Documented	Lakes, rivers, mature trees, snags	Potential habitat	No Impact
<i>Falco peregrinus anatum</i> <b>American peregrine falcon</b>	Sensitive	Suspected	Open habitat, cliffs, near water	Potential habitat	No Impact
<i>Accipiter gentilis</i> <b>Northern goshawk (WA only)</b>	Sensitive	Documented	Mixed forests, dense, mature trees	Potential habitat	No Impact
<i>Strix nebulosi</i> <b>Great gray owl (WA only)</b>	Sensitive	Documented	Mixed forests, mature trees, meadows,	Potential habitat	No Impact

			snags		
<i>Bartramia longicauda</i> <b>Upland sandpiper (OR only)</b>	Sensitive	Suspected	Open grassland, meadows	Potential habitat	No Impact
<i>Melanerpes lewis</i> <b>Lewis's woodpecker</b>	Sensitive	Documented	Open forests, riparian, snags, burns	Potential habitat	May Impact
<i>Picoides albolarvatus</i> <b>White-headed woodpecker</b>	Sensitive	Documented	Open pine forests, large trees, snags	Potential habitat	May Impact
<i>Pipilo chlorurus</i> <b>Green-tailed towhee (WA only)</b>	Sensitive	Documented	Open, shrubby slopes	No habitat	No Impact
<i>Oreortyx pictus</i> <b>Mountain quail (WA only)</b>	Sensitive	Documented	Shrubby slopes, mixed forests, riparian	Potential habitat	May Impact
<i>Rana luteiventris</i> <b>Columbia spotted frog (OR only)</b>	Sensitive	Documented	Ponds	Potential habitat	May Impact
<i>Ascaphus montanus</i> <b>Rocky Mountain tailed frog</b>	Sensitive	Documented	Perennial rocky streams	Suitable habitat	May Impact

Invertebrate Species	Status	Occurrence	Habitat	Habitat presence in project area	Effect/ Impact
<b><u>Forestwide</u></b>					
<i>Radiodiscus abietum</i> <b>Fir pinwheel</b>	Sensitive	Documented	Moist, rocky forests, ravines, water	Suitable habitat	May Impact
<i>Cryptomastix hendersoni</i> <b>Columbia Gorge Oregonian</b>	Sensitive	Documented	Grasslands, open riparian	Suitable habitat	May Impact
<i>Bombus occidentalis</i> <b>Western bumble bee</b>	Sensitive	Documented	Forest edges, meadows	Potential habitat	May Impact
<i>Callophrys johnsoni</i> <b>Johnson's hairstreak</b>	Sensitive	Suspected	Mixed forests w/ dwarf mistletoe	Potential habitat	No Impact
<i>Pristiloma wascoense</i> <b>Shiny tightcoil</b>	Sensitive	Suspected	Mixed forests, deciduous trees, moist, talus	Potential habitat	No Impact
<b><u>Oregon Only</u></b>					
<i>Cryptomastix populi</i> <b>Poplar Oregonian</b>	Sensitive	Suspected	Talus slopes, brushy draws, major river basins	Potential habitat	No Impact
<i>Oreohelix strigosa delicata</i> <b>Blue mountainsnail</b>	Sensitive	Suspected	talus, rock outcrops, open forests, riparian	Potential habitat	May Impact
<i>Colias christina pseudochristina</i> <b>Intermountain sulphur</b>	Sensitive	Suspected	Open forests, meadow, roadside	Potential habitat	May Impact
<b><u>Washington Only</u></b>					

<i>Pristolma idahoense</i> <b>Thinlip tightcoil</b>	Sensitive	Documented	Moist forests, ravines, talus	Potential habitat	May Impact
<i>Polygyrella polygyrella</i> <b>Humped coin</b>	Sensitive	Documented	Moist forests, riparian, water	Suitable habitat	May Impact
<i>Helicodiscus salmonaceus</i> <b>Salmon coil</b>	Sensitive	Suspected	Talus, rocky	No habitat	No Impact
<i>Boloria bellona</i> <b>Meadow fritillary</b>	Sensitive	Suspected	Moist meadows, open aspen, pine, riparian	Suitable habitat	May Impact
<i>Lycaena cupreus</i> <b>Lustrous copper</b>	Sensitive	Suspected	Montane meadows, roadside, talus	Potential habitat	May Impact
<i>Speyeria egleis</i> <b>Great Basin fritillary</b>	Sensitive	Documented	Meadows, rocky ridges	No habitat	No Impact
<i>Callophrys gryneus barryi</i> <b>Barry's hairstreak</b>	Sensitive	Documented	Juniper woodland, openings	No habitat	No Impact

## Cumulative Effects

There are no direct effects expected to the gray wolf and indirect effects are expected to be discountable and/or insignificant and not likely to adversely affect wolves from the proposed project. No cumulative effects are expected for gray wolves.

All of the activities considered in this EA have been considered for their cumulative effects on sensitive species with may impact determinations. Past activities including, but not limited to; timber harvest, grazing, recent timber sales, thinning and fuels reduction projects, firewood cutting, and plantation maintenance, have impacted the quantity, quality, and distribution of habitat with some species benefitting and other not in the short term. The proposed project area has experienced habitat fragmentation as a result of past activities and the small area impacted as a result of the aquatic restoration project will not likely have cumulative effects to these species. Future projects that allow prescribed fires to back into riparian areas may have cumulative effects of some sensitive species if implemented within the short term but would not likely lead to a trend towards federal listing. Long term impacts will be positive for these species and most wildlife as the goal of this project is to restore and improve aquatic habitats and stream hydrology. The effects of project activities on all wildlife species listed in this BE when added to all other past, present, and reasonably foreseeable future activities, are expected to have no negative cumulative effects due to the small area impacted, with the exception of potentially allowing prescribed fires to back into riparian areas as mentioned above for some invertebrate species in the short term. There is likely to be beneficial cumulative effects to wildlife species due to the restorative results expected in aquatic, riparian and meadow habitats.

## TERRESTRIAL WILDLIFE SPECIES REPORT

Additional species that are not Threatened, Endangered, Proposed, or Sensitive were considered in the analysis of the Forestwide Aquatic Restoration project. These species are included in the following wildlife categories:

1. Management Indicator Species (MIS)
2. Landbirds - including neotropical migratory birds (NTMB)

This project is consistent with the 1990 Umatilla National Forest Plan, and Regional Forester's Eastside Forest Plans Amendment 2. The effects to MIS and the rationale for effects determinations follow.

## MANAGEMENT INDICATOR SPECIES

**Table 4.** Management Indicator Species (Umatilla National Forest)

MIS Species	Representing	Habitat Requirements	Habitat Present in Analysis Area
Rocky Mountain Elk	General forest habitat and winter ranges	Forests, meadows, mountain valleys, and foothills	Yes
American Marten	Mature and old growth stands at high elevations	Mature, mesic coniferous forests, with high structural diversity in the understory	Yes
Pileated Woodpecker	Dead/down tree habitat (mixed conifer) in mature and old growth stands	Extensive areas of dense coniferous forests with tall closed canopy, high basal area and large diameter snags	Yes
Northern Three-toed Woodpecker	Dead/down tree habitat (lodgepole pine) in mature and old growth stands	Higher elevation (above 4,500ft) lodgepole pine and mixed conifer forests with a lodgepole component	Yes
Primary Cavity Excavators	Dead/down tree (snag) habitat	Mature higher-elevation coniferous forests for nesting and feeding	Yes

## AFFECTED ENVIRONMENT

### **MIS – Rocky Mountain Elk (*Cervus elaphus*)**

The proposed action would occur in all seasonal ranges of Rocky Mountain elk on the Umatilla National Forest. Big game management on the Umatilla National Forest is a cooperative effort between the Forest Service, Oregon Department of Fish and Wildlife (ODFW), and Washington Department of Fish and Wildlife (WDFW). The agencies cooperate by managing big game and their habitat according to pre-established Management Objectives (MOs) that are based on social and biological factors for each Big Game Management Unit. Currently MOs are being met or close to being met on several units on the Umatilla.

### **MIS – Old growth species**

The following terms for old growth are used interchangeably throughout this section.

- Old Growth
- Late and Old structure (LOS)\*

- Dedicated Old Growth (DOG)
- Managed Old Growth
- Old Forest Multi-stratum (OFMS)
- Old Forest Single Stratum (OFSS)

\*For the purposes of this document LOS includes OFMS or OFSS.

The Forest Plan identifies three MIS for old growth, primarily OFMS structured stands: pileated woodpecker, American (pine) marten and three-toed woodpecker. By providing old growth habitat for these species, it is assumed that habitat for other old growth obligate species will be provided as well.

#### **American marten** (*Martes americana*)

In Oregon and Washington, American marten are found in montane forests of the southern Oregon Coast Range, Siskiyou Mountains, Cascade Mountains, Blue Mountains, Olympic Peninsula, and northeast Washington (Marcot et al. 2003). American marten are typically associated with late-seral coniferous forests with closed canopies, large trees, and abundant snags and down wood (Zielinski et al. 2001). The forest fish and wildlife database includes 41 recorded sightings of American marten. Currently there are roughly 100,000 acres of source habitat for American marten on the Umatilla National Forest.

#### **Pileated woodpecker** (*Dryocopus pileatus*)

Pileated woodpeckers prefer late successional stages of coniferous or deciduous forest, but also use younger forests that have scattered, large, dead trees (Bull et al. 2007). In northeastern Oregon, pileated woodpeckers selected unlogged stands of old-growth grand fir with closed canopies (Bull and Holthausen 1993) and in some cases open stands with high densities of large snags and logs (Bull et al. 2007). These woodpeckers are rarely found in stands of pure ponderosa pine (Bull and Holthausen 1993). They use large-diameter snags or living trees with decay for nest and roost sites, large-diameter trees and logs for foraging on ants and other arthropods, and are usually in dense canopy to provide cover from predators (Marshall et al. 2006). The forest fish and wildlife database includes about 304 recorded sightings of pileated woodpeckers. Currently there are roughly 200,000 acres of source habitat for pileated woodpecker on the Umatilla National Forest.

#### **Three-toed woodpecker** (*Picoides tridactylus*)

The three-toed woodpecker prefers stands where lodgepole pine is either dominant or co-dominant, and uses mostly trees 9" dbh and greater for both nesting and foraging (Bull et al. 1980, Goggans et al. 1987). Suitable habitat is tied to existing levels of diseased and decaying trees with heart rot for nesting and roosting, as well as decaying substrate to provide a prey base for wood-boring insects (Goggans et al. 1987). In particular, three-toed woodpeckers are attracted to areas with high concentrations of beetles, such as habitats created by stand replacing burns or blowdown. The forest fish and wildlife database includes 10 recorded sightings of three-toed woodpecker. Approximately 170,000 acres of source habitat for three-toed woodpecker occurs on the Umatilla National Forest.

#### **MIS – Primary Cavity Excavator**

Primary cavity excavators represent snags and down wood habitat on the Umatilla National

Forest. Regional Forester's Eastside Forests Plan Amendment #2 requires the retention of snag and dead and down material at the 100% potential population level, i.e., 2.39 snags per acres 21" dbh or greater or "*whatever is the best representative dbh of the overstory layer.*" Four woodpecker species including Lewis's woodpecker, white-headed woodpecker, pileated woodpecker, and three-toed woodpecker have been analyzed previously in this report (see ***Threatened, Endangered, Proposed, and Sensitive Species*** and ***MIS*** sections). Other primary cavity excavators occur in the project area.

## **ENVIRONMENTAL CONSEQUENCES**

### **Potential Direct and Indirect Effects for MIS – Rocky Mountain elk**

In general, elk could be temporarily impacted by the proposed activities of this project. Projects could occur on all seasonal ranges. In either case, elk will likely be temporarily displaced from the area during the active period and return during night time hours and upon project completion.

The potential exists to cause disturbance to elk and other big game during the vulnerable winter season if restoration activities are conducted when big game occupies winter range. Generally, aquatic restoration activities don't take place during the winter, however juniper removal activities and/or burning could occur during the winter months. In order to minimize big game disturbance, winter range activities will not take place during periods of big game occupation (see PDCs). Juniper removal over time will improve winter range by allowing increased production of forage and provide for higher ground water flows due to less draw on groundwater from juniper trees.

Since aquatic restoration activities will generally take place in close proximity to both streams and open roads, the amount of elk habitat affected is negligible. The amount of elk habitat affected is negligible. There will be **no impact** on forestwide elk population trends, viability, or habitat by the proposed project for the following reasons:

- The small size of project areas.
- Due to proximity of most activities to existing open roads, elk security will not decrease.
- Activities in big game winter range will only be scheduled during periods when big game are not present on the winter range (see PDCs).

### **Potential Direct and Indirect Effects of Proposed Action for MIS – Old Growth and Old Growth Dependent Species**

The proposed action would not result in any changes or additions to the designated old growth network. There may be some existing old growth habitat adjacent to some project sites.

While some trees may be felled in the riparian area for use for large wood placements in the streambed, the goal is to maintain healthy stands of riparian trees for stream shading and future wood inputs to the stream. If additional large wood is needed for the streambed, it will be moved down from upland sites as approved by a wildlife biologist.

Wildlife and invertebrate species that depend on down wood, snags, dwarf mistletoe brooms, dense forest with abundant saplings and small poles, and closed canopy forests for survival and reproduction, will not be detrimentally affected by the proposed action. Habitat types will not be fragmented or connectivity will not be decreased for old growth dependent species. Therefore,

old growth dependent species, **will not be negatively impacted** as a result of aquatic restoration activities. The proposed activities **will not contribute to a negative trend in populations or viability** on the Umatilla National Forest for American marten, pileated woodpecker, or three-toed woodpecker.

#### **Potential Direct and Indirect Effects of Proposed Action for MIS – Primary Cavity Excavators (including pileated and three-toed woodpeckers)**

Project activities are not expected to have negative impacts on primary cavity excavators or their habitat with the exception of potential removal of hazard trees but the number would be inconsequential and will not impact forest-wide viability. The project activities are expected to have a negligible impact to snags or down wood and will not result in any changes and/or additions to designated old growth. Project activities will be consistent with the Forest Plan and the Eastside Screens.

### **LANDBIRDS**

The Northern Rocky Mountains Bird Conservation Plan (Altman 2000) identifies priority habitat types in the Blue Mountain of Eastern Oregon important for landbird species conservation. The project area falls in the riparian woodland and shrub forest type, one of 3 priority habitats (excluding unique habitat types) identified in the plan.

Altman identifies conservation issues associated with riparian woodland and shrub including but not limited to:

- Habitat degradation from livestock overgrazing which can widen channels, raise water temperatures, reduce overstory cover, etc.
- Fragmentation and loss of large tracts necessary for area-sensitive species.

The proposed action will aid in the restoration of riparian sites due to the placement of large wood, replacement of damaged or inadequate culverts and the establishment of riparian vegetation. The goal of the project is to work to allow streams to normally interact with the floodplain, allow channels to narrow and deepen, and minimize siltation. This action will not likely impact neotropical migratory birds at the population level and will improve riparian habitats over the long term.

### **PROJECT DESIGN CRITERIA**

#### **Threatened, Endangered or Sensitive Species:**

- ❑ If wolves become established (denning) while project implementation is occurring, appropriate conservation measures will be implemented. Wildlife biologists will refer to “Status and trend of gray wolves and forest management on the Umatilla National Forest” (Berkley and Hickman 2015) white paper to determine appropriate conservation measures.
- ❑ If any evidence of wolverines is discovered during project implementation, appropriate conservation measures will be implemented

#### **Raptors:**

- ❑ Activity restrictions will occur within currently known or discovered goshawk or other raptor nest stands as appropriate to conserve nesting habitat and to minimize disturbance to nesting individuals. Consult with wildlife biologist for appropriate conservation measures for current and discovered nests (restrictions may vary by species).
- ❑ A buffer zone will be established by the wildlife biologist to restrict activities near the nest area during occupancy (buffer may vary by species).
- ❑ Where possible, retain trees with inactive nests that may be important to secondary nesters (e.g. Great Gray Owl).

#### **Snags:**

- ❑ Any snags in riparian areas or uplands will be protected from disturbance, removal, or use in stream restoration activities unless deemed a safety hazard at a specific work site.

#### **Big Game:**

- ❑ Within big game winter range a wildlife biologist will be consulted between December 1 and April 1 to determine if activities should be restricted for big game needs.

#### **Wildlife (general):**

- ❑ Wildlife friendly fences will be used. Range specialist and wildlife biologist will work together on fence design. Recommended guidelines for wildlife friendly fences: Paige, C. 2012. A Landowner's Guide to Wildlife Friendly Fences. Second Edition. Private Land Technical Assistance Program, Montana Fish, Wildlife & Parks, Helena, MT. 56 pp."
- ❑ Escape ramps will be installed on all water developments.

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